

MITIGATION AND MONITORING PLAN

Introduction

The City of Berkeley proposes the Berkeley Bay Trail Extension project as a spur of the San Francisco Bay Trail to improve bicycle and pedestrian access to the Berkeley Marina. The Bay Trail Extension alignment is approximately 1.3 miles long and extends from the existing ramp leading from the I-80 bicycle/pedestrian overcrossing through the Berkeley Marina to the entrance adjacent to the Berkeley Yacht Club.

The proposed alignment is divided into 5 segments from funding and implementation perspectives. Initial trail development will consist of the eastern-most segment leading from the existing I-80 bicycle /pedestrian overcrossing to the southwest corner of the East Lawn of the Marina. Remaining segments will be built out as funding is appropriated. The main elements of the trail include a 12-foot-wide multi-use path that includes 2-foot-wide graded shoulders. Several other features will also be included in the Trail design such as lighting and benches. Parking areas will be redesigned as will area drainage. A pedestrian bridge is proposed for installation over Strawberry Creek Cove. Construction involves removal of existing path and/or structures and trees and installation of a new path.

Mitigation Monitoring Table

This Mitigation and Monitoring Plan (MMP) outlines procedures for the implementation of mitigation measures identified in the 2003 Bay Trail Extension to the Berkeley Marina Initial Study/Mitigated Negative Declaration (IS/MND) to reduce all potential environmental effects of the proposed action to less than significant levels. The City of Berkeley and its contractors must fully comply with the conditions and measures described in this MMP. The attached table provides a Mitigation and Monitoring Plan (MMP) for the proposed action.

The MMP is organized in table format and is keyed to each mitigation measure identified in the IS/MND. The MMP is organized by environmental issue area, and discusses only those impacts for which mitigation has been identified. The intent of the formatting the MMP as a table is to provide the reader with a concise and quick summary of the measures to be implemented, agencies involved, timing of implementation, and frequency of monitoring. The purpose of each heading column is as follows:

APPENDIX C: MITIGATION AND MONITORING PLAN

- Mitigation Measure: A summary of the mitigation requirements
- Implementing Action: Actions necessary to implement mitigation
- Method of Verification: The method to ensure that the mitigation measure has been implemented
- Timing of Verification: A schedule for conducting each mitigation monitoring and reporting action
- Responsible Parties: The agencies responsible for monitoring implementation mitigation measures. Other agencies involved in the implementation of the measure are also listed.

Mitigation and Monitoring Plan Table for the Bay Trail Extension to the Berkeley Marina

MITIGATION	IMPLEMENTING ACTION	METHOD OF VERIFICATION	TIMING OF VERIFICATION	RESPONSIBLE PARTY
<p>4.3.1-1. A tree removal and replacement design plan shall be submitted to the City for approval that outlines the exact species and location of trees to be removed as well as the species, location and size of replacement trees. Trees greater than 6 inches dbh shall be replaced at a 4:1 ratio. Tree root growth shall be considered when choosing replacement tree location to minimize chances of uprooting the trail or other structures. Irrigation and replacement tree maintenance shall also be included in the plan. The plan shall be implemented prior to the completion of the project.</p>	<p>The City will approve of the tree removal and replacement design plan before construction begins</p>	<p>Review of design plan and verification of approval</p>	<p>Before construction begins for each segment</p>	<p>City of Berkeley</p>
<p>4.3.3-1. Prior to site grading, a grading plan shall be submitted to the City of Berkeley Planning Department for review. The grading plan shall include measures to reduce emissions from construction equipment and wind blown soils that shall include, but not be limited to, twice-daily watering of disturbed soils as necessary during dry periods, proper maintenance of construction equipment, and other Best Management Practices to reduce windblown dust. The grading plan shall be followed for all construction activities for the project. Measures included in Table 1 shall also be incorporated into the grading plan (refer to (c) below).</p>	<p>The City of Berkeley will approve of the grading plan before construction begins</p>	<p>Review of grading plan and verification of approval</p>	<p>Before construction begins for each segment</p>	<p>City of Berkeley</p>

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<p>4.3.4-1. Conduct surveys for burrowing owls within 30 days prior to all construction in all areas identified at the time of construction to have suitable habitat for burrowing owls, following the CDFG survey protocol currently in effect at that time. If construction activities are delayed or suspended for more than 30 days, the site shall be re-surveyed. A construction buffer shall be established around each occupied burrow, at a minimum radius of 160 feet (50 meters) from the burrow during the non-breeding season (September 1 through January 31) and 250 feet (75 meters) from the burrow during the breeding season (February 1 through August 31). During the non-breeding season, if such buffers cannot be protected, the burrowing owls shall be passively relocated prior to construction, subject to prior approval of CDFG (CDFG does not allow relocation of burrowing owls during the breeding season).</p>	<p>The City will coordinate with a qualified wildlife biologist to conduct a burrowing owl preconstruction survey, and to establish buffer zones around any dens. If buffers cannot be protected, then in the non-breeding season burrowing owls will be passively relocated by the qualified biologist after coordination with the CDFG.</p>	<p>Review survey results. Coordinate with Contractor to ensure that buffer zones are respected and CDFG is notified in cases where owls need to be relocated.</p>	<p>Ensure that surveys occur within 30 days of construction. Periodically verify that buffer zones are being observed. Monitor passive relocation of owls as necessary</p>	<p>City of Berkeley CDFG</p>
<p>4.4.4-2. If any trees (greater than 15 feet tall) are to be removed during the breeding season (between March 1st through August 31st), survey shall be conducted for white-tailed kite, Cooper's hawk, red-tailed hawk, red-shouldered hawk, and other raptors within 30 days prior to tree removal. If an active raptor nest(s) is located in or within 200 feet from the project site, a construction buffer, at a minimum radius of 200 feet from the dripline of the nest tree, shall be established around each nest until nesting activities have ended. No construction activities shall be allowed within the 200-foot buffer(s) until the nesting raptors have left the nest(s).</p>	<p>The City will coordinate with a qualified biologist if any trees greater than 15 feet tall are to be removed between March 1st, and August 31st. The biologist will conduct raptor surveys and establish construction buffers if necessary</p>	<p>Review tree removal plans Review survey results. Coordinate with Contractor to ensure that buffer zones are respected.</p>	<p>Ensure that surveys occur within 30 days of construction. Periodically verify that buffer zones are being observed.</p>	<p>City of Berkeley</p>

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<p>4.3.4-3. If any excavated soil is to be moved off-site, such excavation areas shall first be inspected by a qualified botanist, who shall identify those areas that are potentially contaminated by perennial pepperweed seeds or root stock. Soil excavated from the identified areas shall be disposed of within the project site or in a qualified landfill.</p>	<p>The City will coordinate with a qualified botanist to inspect areas for perennial pepperweed seeds or root stock prior to excavation. The City will ensure proper disposal if contaminated soil is identified.</p>	<p>Verify that a biologist inspects the area. Review disposal plans/contracts. Monitor on-site for compliance</p>	<p>Prior to excavation in the Strawberry Cove area.</p>	<p>City of Berkeley</p>
<p>4.3.4-4. Prior to construction, the City of Berkeley shall obtain permits from the Corps, RWQCB, and BCDC for impacts and project features within the jurisdiction of those agencies. The City shall comply with the terms and conditions of those permits, including mitigation measures, if required.</p>	<p>The City will obtain permits from the Corps, RWQCB, and BCDC and comply with the terms of these permits</p>	<p>Review permits and periodically monitor for compliance with terms of permits</p>	<p>Prior to construction and monitor during construction</p>	<p>City of Berkeley, Corps, BCDC, RWQCB</p>
<p>4.3.4-5. No construction equipment or disturbance shall be allowed within the two seasonal wetlands or within 10 feet from the wetlands. A 10-foot-wide buffer shall be established around each wetland to protect it during construction, and silt fencing shall be installed at the outer edge of the buffers. The silt fencing shall be properly maintained during construction and properly removed after construction to avoid impacts on wetlands.</p>	<p>The City will ensure that a 10 foot buffer is established around each wetland and silt fencing is installed and maintained</p>	<p>Periodically monitor for compliance</p>	<p>Prior to construction and monitor during construction</p>	<p>City of Berkeley</p>
<p>4.3.4-6. The City of Berkeley shall use trash receptacles within the Eastshore State Park that are designed to be inaccessible to animals.</p>	<p>The City will ensure that receptacles that are inaccessible to animals are used.</p>	<p>Verify at the end of construction that proper receptacles are in place</p>	<p>At the end of construction</p>	<p>City of Berkeley</p>
<p>4.3.5-1. If archaeological resources are discovered during excavation, all work in the immediate vicinity shall be suspended pending site investigation by a qualified archaeologist to assess the materials and determine their significance. If a qualified professional determines that the resource shall yield new information or important verification of previous findings, construction in the immediate area shall not resume until state and federal officials have been consulted and the resources appropriately evaluated and treated, as required under federal and state regulations.</p>	<p>If a resource is discovered, the Contractor will suspend work in the vicinity of the resource until a site investigation by an archeologist is conducted. If the resource is significant, the City will not allow construction to resume until state and federal officials have been consulted.</p>	<p>If a resource is discovered, monitor site to ensure work is stopped. Coordinate with archeologist to verify status of resource and review agency consultation documentation</p>	<p>As necessary during construction</p>	<p>City of Berkeley</p>

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<p>4.3.5-2. If archaeological resources are discovered during excavation for the proposed action and avoidance of these resources is not feasible, evaluation of the resources shall be required. An evaluation plan shall be prepared that provides for the methodical excavation of resources that would be adversely affected. Only a qualified archaeologist shall be allowed to collect any discovered prehistoric resources. The work shall be accomplished within the context of a detailed research design and in accordance with current professional standards. The plan shall result in the extraction of sufficient volumes of non-redundant archaeological data to address important regional research issues. Detailed technical reports shall be prepared to document the findings. If the resources are determined to be eligible for listing on the NRHP, an appropriate treatment (mitigation) plan shall be developed and implemented. Treatment would include data recovery to gather the information contained in the site.</p>	<p>The City will prepare and evaluation plan if avoidance of any found resources is not feasible.</p> <p>The City will ensure that only a qualified archeologist handles prehistoric resources</p> <p>The City will ensure detailed reports to document any findings are prepared</p>	<p>Review of evaluation plan if necessary. Monitor site for compliance of mitigation if resources are found. Review reports and treatment (mitigation plan) if necessary</p>	<p>As necessary during construction</p>	<p>City of Berkeley, NRHP</p>
<p>4.3.5-3. If the project sponsor or any construction contractors discover prehistoric archaeological deposits that include human remains during excavation for the proposed project, the County Coroner shall be immediately notified. If the remains are found to be Native American, local Native American groups and the Native American Heritage Commission (NAHC) shall be notified within 24 hours. The most likely descendents of the deceased Native American shall be notified and given the chance to make recommendations for the remains. If no recommendations are made within 24 hours, remains may be reinterred elsewhere on the property. If recommendations are made and not accepted, the NAHC shall mediate the problem.</p>	<p>The City will notify the County Coroner if necessary and if the remains are Native American, the City will notify local Native American groups and the NAHC and carry out any recommendations</p>	<p>Monitor site for compliance of mitigation if remains are found</p>	<p>As necessary during construction</p>	<p>City of Berkeley, NAHC</p>

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<p>4.3.6-1. The Strawberry Creek Bridge shall be designed by a licensed engineer and shall conform to the seismic design standards of Caltrans and the Uniform Building Code (UBC).</p>	<p>The City will coordinate with a licensed engineer to prepare the Bridge design</p>	<p>Review and approval of bridge design</p>	<p>Prior to construction</p>	<p>City of Berkeley</p>
<p>4.3.6-2. Prior to ground disturbance, a grading plan shall be submitted to the City Public Works Department for review. The grading plan shall include a construction erosion control plan with Best Management Practices designed to minimize sediment in site runoff during construction. The provisions shall include: limiting the size of areas disturbed, watering of disturbed soils twice daily, avoiding long unbroken flow paths, making drainage swales broad and flat, and routing off-site drainage around newly disturbed areas. The grading plan shall also have provisions for minimization of grading and excavation and for a balance of cut and fill. Trapping sediment before it leaves the construction site would minimize any potential sedimentation of waterways. This would be accomplished through the use of riprap, or siltation fencing. (Sediment fencing is preferred over hay bales because use of hay has been found to proliferate the expansion of invasive and non-native species.) Any disturbed areas should be revegetated as soon as possible once construction is completed; where appropriate, topsoil should be stockpiled and used for the revegetation of disturbed areas. This plan shall be implemented during project construction.</p>	<p>The City will approve the grading plan and ensure its implementation during construction</p>	<p>Review and approval of grading plan and periodically monitor for compliance</p>	<p>Prior to construction and monitor during construction</p>	<p>City of Berkeley</p>
<p>4.3.6-3. Earthmoving activities shall not occur during rainy periods of the year.</p>	<p>The City will prepare construction schedules outside of the rainy season</p>	<p>Review of schedule</p>	<p>Prior to construction</p>	<p>City of Berkeley</p>

APPENDIX C: MITIGATION AND MONITORING PLAN

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4.3.7-1. Excavated soils from all non-paved areas shall be handled such that dust is controlled, minimizing exposure to construction crews and recreationalists.	The City will ensure that Contractor controls dust	Monitor periodically	During Construction	City of Berkeley
4.3.7-2. Excavated and freshly exposed soils in the Berkeley Brickyard shall be tested for petroleum hydrocarbons, metals and CPOCs. Prior to disposal or reuse, any excavated soils found to contain contaminants at levels considered unsafe for human exposure or environmental exposure shall be disposed of appropriately. If exposed soil is found to contain CPOCs, a layer of uncontaminated, clean soil shall be imported and filled over the existing soil to prevent exposure of CPOCs in the surface layer.	The City will coordinate with Contractor to ensure that excavated soils from the Berkeley Brickyard are tested for petroleum hydrocarbons and metals	Review test results	Prior to Construction	City of Berkeley
4.3.7-3. The City shall coordinate with the California Department of Toxic Substance Control (CDTSC) Voluntary Cleanup Program and take the necessary steps to ensure proper cleanup and disposal of any contaminated soils encountered during construction.	The City will coordinate with the Contractor to ensure proper cleanup and disposal of contaminated soils	Monitor periodically	During Construction	City of Berkeley, CDTSC
4.3.8-1 All necessary permits from the San Francisco Bay Regional Water Quality Control Board (RWQCB) shall be obtained before construction. A Storm Water Pollution Prevention Plan (SWPPP) shall be prepared in accordance with Section 4019(A)(1) of the Clean Water Act. The plan shall address control of runoff from parking lots and other impervious surfaces.	The City will obtain necessary permits and ensure a SWPPP is prepared The City will ensure that all conditions are implemented	Review permits and SWPPP Monitor periodically	Prior to construction Monitor during construction	City of Berkeley, RWQCB
4.3.8-2. Renovated parking lots shall be designed with grease traps installed in storm drains and shall be subject to periodic maintenance.	The City will approve parking lot designs The City will ensure storm drain maintenance	Review and approval of parking lot design Monitor storm drain maintenance	Prior to construction During operation of Trail	City of Berkeley
4.3.8-3. The project shall be subject to meet all requirements as listed in the Alameda Countwide Clean Water Program (ACCWP)	The City will ensure design plans meet the requirements of ACCWP	Review and approval of design plans	Prior to Construction	City of Berkeley

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Clean Water Program (ACCWP).				
4.8.9-1. For the portions of the Bay Trail Extension that are within the Eastshore State Park, agreements shall be formalized between the City of Berkeley and the California Department of Parks and Recreation to allow the City of Berkeley to make improvements on State Lands.	The City will make necessary agreements	Review of agreements	Prior to Construction	City of Berkeley, California Department of Parks and Recreation
4.8.9-2. A permit from the BCDC shall be secured for the proposed project before construction can commence, if necessary. The design plans for the Berkeley Bay Trail Extension and any associated structures shall be submitted for approval upon certification of this Negative Declaration.	The City will obtain necessary permits and ensure that the design plans are submitted for approval by the BCDC	Review of BCDC approvals	Prior to construction	City of Berkeley, BCDC
4.8.9-3. The SLC shall be consulted and any permits or leases shall be secured, if necessary, for the City of Berkeley to make improvements on State Lands.	The City will initiate consultation with SLC and ensure leases or permits are secured if necessary.	Review of permits or leases or consultation	Prior to construction	City of Berkeley, SLC
4.3.11-1. Noise control equipment shall be used on construction equipment (i.e. mufflers) to reduce noise levels. Impact tools should be shielded or shrouded when practical and all equipment should have muffled exhaust systems.	The City will coordinate with the contractor to ensure noise control equipment is used	Periodically monitor	During construction	City of Berkeley
4.3.11-2. During pile driving activities at Strawberry Cove, the City of Berkeley shall place warning signs identifying the potential for increased noise levels in the vicinity due to construction activities. These signs should be placed along public access routes approximately 500 feet from the site of pile driving activities. This distance would reduce noise levels generated by pile driving to approximately 70 dBA, which would be consistent with City of Berkeley noise guideline	The City will place warning signs 500 feet from pile driving activity	Periodically monitor	During construction	The City of Berkeley
4.3.13-1. Fire access lanes through the parking lots shall be designed to meet appropriate standards and the guidelines of the Uniform Fire Code and the City of Berkeley Planning Department. Fire access routes shall be clearly identified and recognizable, be at least 20 feet wide, have at least a 13'6" vertical	The City will ensure that parking lot designs comply with the Uniform Fire Code and City of Berkeley Planning Department guidelines	Review of parking lot design	Prior to construction	City of Berkeley, City of Berkeley Fire Department

APPENDIX C: MITIGATION AND MONITORING PLAN

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clearance from trees, be suitable in all weather conditions, and constructed to support the weight of fire engines.				
4.3.14-1. During the construction of each segment of the project, surrounding facilities shall remain open to the extent feasible. Temporary, alternate entrances and access paths shall be provided in order to prevent inaccessibility to any of the recreational opportunities at the Marina where possible.	The City will ensure that temporary alternate paths are available.	Periodically monitor	During construction of each segment	City of Berkeley
4.3.15-1. The maximum speed limit allowed in parking lots shall be 15 miles per hour. Signs shall be posted at the entrance of lots and within lots indicating speed limits and warning of a congested area.	The City will ensure that speed limit signs are posted in the parking lots	Police casually patrol the area	During project operation	City of Berkeley, City of Berkeley Police Department
4.3.15-2. Final parking lot design plans that include a description of renovated areas, new lot features, parking space and access route layout, and any other safety and design features shall be submitted to the City for approval before build-out.	The City will approve of the final parking lot design	Review and approval of design	Prior to construction	City of Berkeley